

AMENDMENTS TO THE CLAIMS

Presented below is a complete set of claims with current status indicators.

1. (currently amended) A system for tracking the location of an interventional device within an anatomical site, said system comprising:

a magnetometer system adapted to provide present-position coordinate data related to the present position of the device ~~and future-present-position coordinate data related to future positions of the device~~ as the device is moved about the anatomical site;

Al a processor communicating with a database having stored therein the coordinate data of a plurality of past positions of the device, each of the past-position coordinate data corresponding to one of the present-position coordinate data associated with a previous position of the device, the processor adapted to receive the present-position coordinate data, process the present-position coordinate data and output repeat-position indication data when the present-position coordinate data is substantially the same as one of the past-position coordinate data; and

a sensory indicator adapted to receive the repeat-position indication data from the processor and process the data to provide a sensory indication.

2. (original) The system of claim 1 wherein the magnetometer system comprises a transducer located on the device and a magnet defining the origin of the coordinate system of the coordinate data.

3. (original) The system of claim 2 wherein the magnet comprises a grounding magnetic pad located about the anatomical site.

4. (original) The system of claim 1 wherein the processor is adapted to process the coordinate data by being further adapted to compare the present-position coordinate data to past-position coordinate data.


5. (original) The system of claim 4 wherein the processor is adapted to compare the present-position coordinate data to a select group of past-position coordinate data.

6. (original) The system of claim 5 wherein the select group comprises a select number of past-position coordinate data stored prior to receipt of the present-position coordinate data.

7. (original) The system of claim 5 wherein the select group comprises past-position coordinate data stored within a select time frame prior to receipt of the present-position coordinate data.

8. (original) The system of claim 1 wherein both present- and past-position coordinate data comprise Cartesian coordinate data.

9. (original) The system of claim 1 wherein both present- and past-coordinate data comprise polar coordinate data.

 10. (original) The system of claim 1 wherein the sensory indicator comprises a visual display device adapted to display repeat-position indication data.

11. (original) The system of claim 10 wherein:
the processor is further adapted to output past-position coordinate data to the sensory indicator; and
the sensory indicator is adapted to display past-position data in a manner different from the repeat-position indication data.

12. (original) The system of claim 10 wherein:
the processor is further adapted to output past-position coordinate data and present-position coordinate data to the sensory indicator; and
the sensory indicator is adapted to display present-position coordinate data in a manner different from the past-position data.

13. (original) The system of claim 1 wherein the sensory indicator comprises an audio device adapted to produce an audible sound as the sensory indication.

14. (original) The system of claim 1 wherein the processor is further adapted to compile data related to the number of times repeat-position indication data is output.

15. (original) A method of tracking the movement of an interventional device within an anatomical site, said method comprising:

determining position coordinate data for the device relative to an origin;

storing the position coordinate data as a past position; and

upon movement of the device:

determining subsequent position coordinate data for the device relative to the origin;

comparing the subsequent position to at least one of the past positions; and

providing repeat-position indication data if the subsequent position is substantially the same as one of the past positions, otherwise storing the subsequent position coordinate data as a past position.

16. (original) The method of claim 15 wherein determining position coordinate data and subsequent position coordinate data comprises:

positioning a magnet about the anatomical site to thereby define the origin of the coordinate system; and

placing a transducer on the device, the transducer adapted to operate in conjunction with the magnet to provide position coordinate data.

17. (original) The method of claim 15 wherein subsequent position coordinate data is compared to a select group of past-position coordinate data.

18. (original) The method of claim 17 wherein the select group comprises a select number of past-position coordinate data stored prior to determination of the subsequent position coordinate data.

19. (original) The method of claim 17 wherein the select group comprises past-position coordinate data collected within a select time frame prior to determination of the subsequent position coordinate data.

20. (original) The method of claim 15 wherein the subsequent position coordinate data is substantially the same as a past-position coordinate data when the points defined by the coordinate data are within a specified distance of each other.

21. (original) The method of claim 15 further comprising, in response to repeat-position indication data, providing a visual indication that the subsequent position is substantially the same as one of the past positions.

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22. (original) The method of claim 15 further comprising, in response to repeat-position indication data, providing an auditory indication that the subsequent position is substantially the same as one of the past positions.

23. (original) A method of placing an interventional device at a location within an anatomical site, said method comprising:

defining the location as coordinate data of a three-dimensional coordinate system having an origin defined by a magnet positioned relative to the anatomical site;

positioning a transducer on the device, the transducer adapted to operate in conjunction with the magnet to provide real-time position coordinate data related to the position of the transducer;

moving the device within the anatomical site; and

providing a sensory indication when the position coordinate data is substantially the same as the location coordinate data.